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Montana

MONTANA WATER SUPPLY OUTLOOK

Snowpack and Streamflow Forecasts as of May 1, 1985

PLEASE RE

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The Montana Water Supply Outlook is a publication of the U. S. Soil Conservation Service. The SCS administers the Cooperative Snow Survey Program in cooperation with other federal, state and private agencies, organizations, and individuals.

The report is prepared by SCS, Snow Survey and Water Supply Forecast Staff, Room 443, Federal Building, 10 East Babcock, Bozeman, Montana.

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Snowpack peaks and melt begins

Earlier than normal melt has reduced snowpacks statewide. Very few snow courses showed increases in the water content from April 1 to May 1. Usually, all high elevation snow courses and many mid-elevation sites increase during April.

Most snow pillow sites show the season's maximum water content was reached the first week in April.

Presently, snowpack in the northern half of the state is 70 to 90 percent of average while the southern part is only 50 to 70 percent of average. A few snow courses in the southern part the state have minimum or near minimum of record May 1 snow water content. Many low elevation snow courses report no snow.

It appears this season's melt is 2 to 4 weeks ahead of normal.

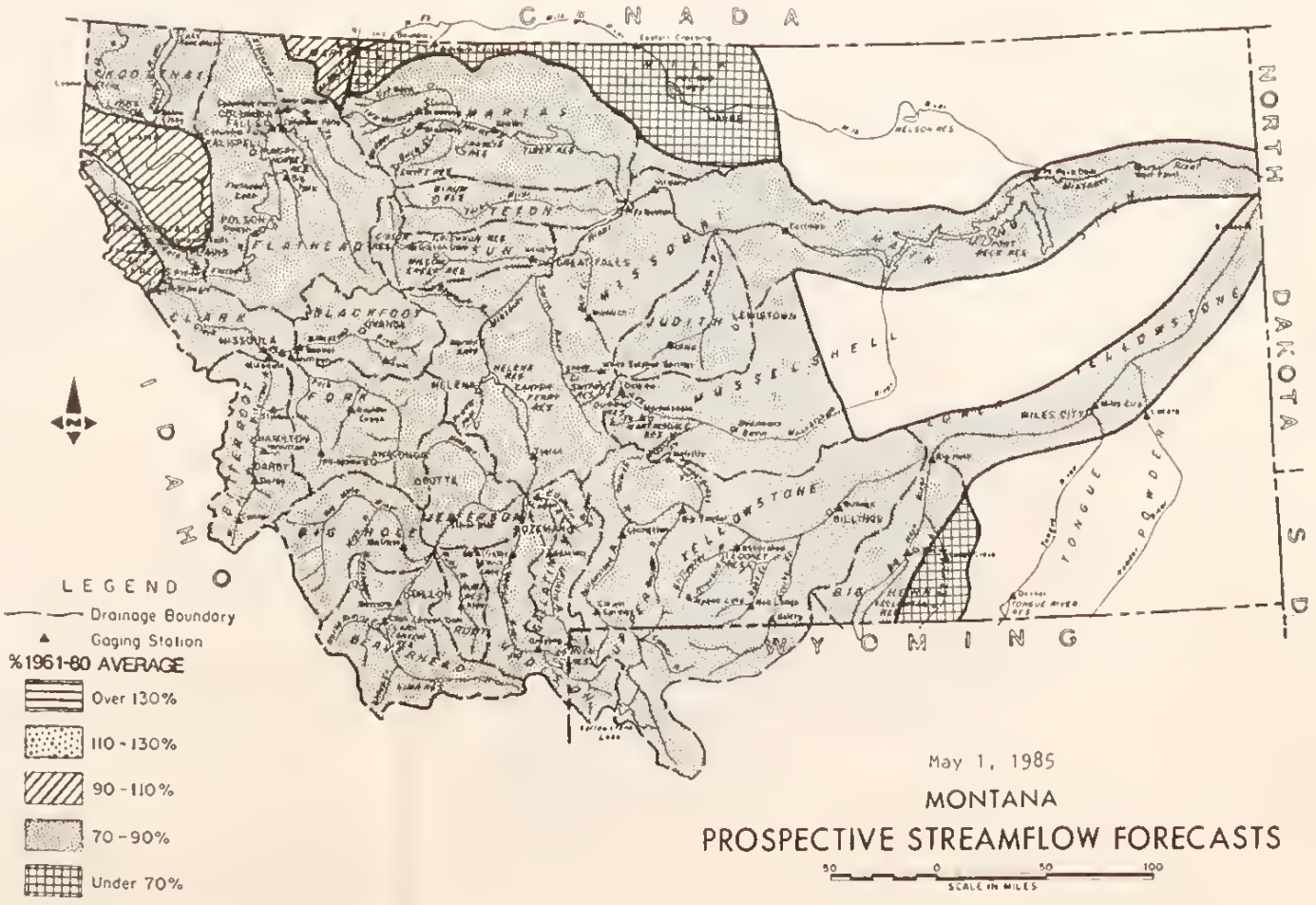
Stream runoff begins early

All rivers and streams are forecast to have below average runoff for the May through September period. April runoff was generally average to above average.

Streamflow forecasts in the southern part of the state are generally in the 70 to 80 percent of average range. Streams further north are generally in the 80 to 90 percent range.

Soils are quite dry for this time of year.

Mid- to late season shortages of irrigation water are expected on many drainages.



Missouri River & Hudson Bay Drainages

STREAMFLOW FORECASTS May 1, 1985

BASIN STREAM and/or FORECAST POINT	PERIOD	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
		MAY - SEPTEMBER				MAY - JULY			
RED ROCK RIVER near Monida (1)		64.5	80	211	80.7	60.5	82	179	73.5
BEAVERHEAD RIVER near Grant (2)		97.0	81	372	120	82.2	83	274	99.0
BEAVERHEAD RIVER at Barratts (2)		130	80		162	110	82		134
RUBY RIVER near Alder		70.0	76		91.6	57.5	77		74.9
BIG HOLE RIVER near Melrose		525	78		674	475	77		614
WILLOW CREEK near Harrison		13.5	77		17.5	12.0	78		15.3
MADISON RIVER near Grayling (3)		370	84	510	440	275	83	379	332
MADISON RIVER near McAllister (4)		620	83	1,005	743	465	82	765	568
GALLATIN RIVER near Gateway		400	78		514	335	77		433
SUM OF EAST+WEST FORKS HYALITE CR. nr Bozeman (5)		20.0	76		26.2	17.2	77		22.4
HYALITE CREEK near Bozeman (6)		32.0	76		42.0	27.2	76		35.9
GALLATIN RIVER at Logan		385	71		541	325	72		452
MISSOURI RIVER at Toston (7)		1,782	81	3,420	2,200	1480	80	2,772	1,849
SHEEP CREEK near White Sulphur Springs		17.2	85	16.9	20.2	15.0	86	14.3	17.4
SUN RIVER at Gibson Dam (8)		470	87	311	538	425	87	271	489
BELT CREEK near Monarch		100	80		126	92.7	81		114
MISSOURI RIVER at Fort Benton (9)		2,800	81		3,440	2,375	81		2,928
TWO MEDICINE CREEK near Browning (10)		197	89		222	187	89		210
BADGER CREEK near Browning		103	86		120	88.0	85		103
INFLOW SWIFT RESERVOIR near Dupuyer		68.5	86	40.5	79.7	59.0	87	33.2	67.7
CUT BANK CREEK at Cut Bank		85.0	82		104	83.0	85		98.0
MARIAS RIVER near Shelby		375	79	187	473	360	80	175	449
MISSOURI RIVER at Virgelle (11)		3,190	81		3,960	2,770	81		3,418
MISSOURI RIVER near Landusky (11)		3,580	83		4,303	3,040	82		3,707
NORTH FORK MUSSELSHELL RIVER near Delpine		4.3	81		5.3	3.5	81		4.3
SOUTH FORK MUSSELSHELL RIVER above Martinsdale		44.5	79		56.5	42.2	80		52.7
MISSOURI RIVER below Fort Peck Dam (11)		3,495	82		4,244	3,010	81		3,711
MILK RIVER at Eastern Crossing (12)		178	89		199				
INFLOW LAKE SAKAKAWEA, ND (11)		27.7	50		55.4				
		8,360	77		10,855	7,475	77		9,708
SASKATCHEWAN RIVER BASIN									
SWIFTCURRENT CREEK at Sherburne (13)		114	94		121	98.8	95		104
ST. MARY'S RIVER near Babb (13)		432	93		465	370	94		394

(1) Adjusted for storage in Lima Reservoir
(2) Adjusted for storage in Lima and Clark Canyon Reservoirs.
(3) Adjusted for storage in Hebgen Lake.
(4) Adjusted for storage in Hebgen Lake and Ennis Lake.
(5) Sum of West Fork Hyalite Creek and East Fork Hyalite Creek above the Reservoir.
(6) Adjusted for storage in Middle Creek Reservoir.
(7) Adjusted for storage in Lima, Hebgen, Ennis & Clark Canyon Reservoirs
(8) Adjusted for storage in Gibson Reservoir & diversions.
(9) Adjusted for storage in Lima, Clark Canyon, Hebgen, Ennis, Gibson, Pishkun, Willow Creek & Canyon Ferry Reservoirs.
(10) Adjusted for storage in Two Medicine Reservoir & diversions in Two Medicine Canal.
(11) Adjusted for all upstream reservoirs.
(12) Flow at Eastern Crossing minus St. Mary's Canal.
(13) Adjusted for storage in Lake Sherburne.

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

PEAK FLOWS (MAXIMUM MEAN DAILY) (Ac. flow for 24 hrs. on day of greatest flow)

FORECAST POINT	PEAK FLOW (SECOND FEET) Forecast Range	Average
Big Hole River near Melrose	5,500 - 6,500	8,020
Ruby River above Reservoir	600 - 800	939
Gallatin River near Gateway	4,000 - 5,000	5,432
Gallatin River near Logan	4,000 - 5,500	5,488
Missouri River at Toston	13,000 - 16,000	18,582
Belt Creek near Monarch	1,000 - 1,700	1,854
Marias River near Shelby	3,500 - 5,000	13,312
S. Fk. Musselshell above Martinsdale	700 - 900	745

*Highly abnormal weather during the critical melting period may cause the peak to be outside the indicated range

Average based on 1961-80 period.

Current weather and snowpack conditions indicate peak snowmelt runoff will be below average on all unregulated streams. The Big Hole and tributaries to the Sun and Marias Rivers are expected to reach their peak around May 20 with the Gallatin and Missouri Rivers peaking about a week later.

Missouri streamflow low this summer

April runoff was well above average in the Missouri headwaters with volumes in the 120 to 160 percent of average range. Most downstream tributaries had April streamflows in the near average to a little above average range.

May through September forecasts are in the 70 to 80 percent of average range for Missouri headwater streams and 80 to 90 percent of average for downstream tributaries.

Natural runoff in the Milk River system still looks bleak even though there is a good supply for the St. Mary's diversion. Storage in the Milk River drainage continues to be low.

Soils that are not snow-covered are drying rapidly from the lack of moisture and warm temperatures.

Shortages of irrigation water supplies are anticipated on most southwest streams for mid- to late season period. Shortages will also be more severe on smaller streams with lower elevation headwaters.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

STREAM or AREA	Flow Period: Spring Season	Flow Period: Late Season
Beaverhead	Fair	Poor
Ruby	Fair	Poor
Big Hole	Fair	Fair
Boulder	Fair	Fair
Jefferson	Fair	Poor
Madison	Fair	Fair
Gallatin	Fair	Poor
West-Side Missouri	Fair	Fair
Smith-Belt	Fair	Fair
Sun	Avg	Fair
Teton	Avg	Fair
Marias	Avg	Fair
Judith	Fair	Fair
Musselshell	Fair	Fair
Milk	Fair	Poor
Bear Paws	Fair	Fair
St. Mary's	Avg	Fair

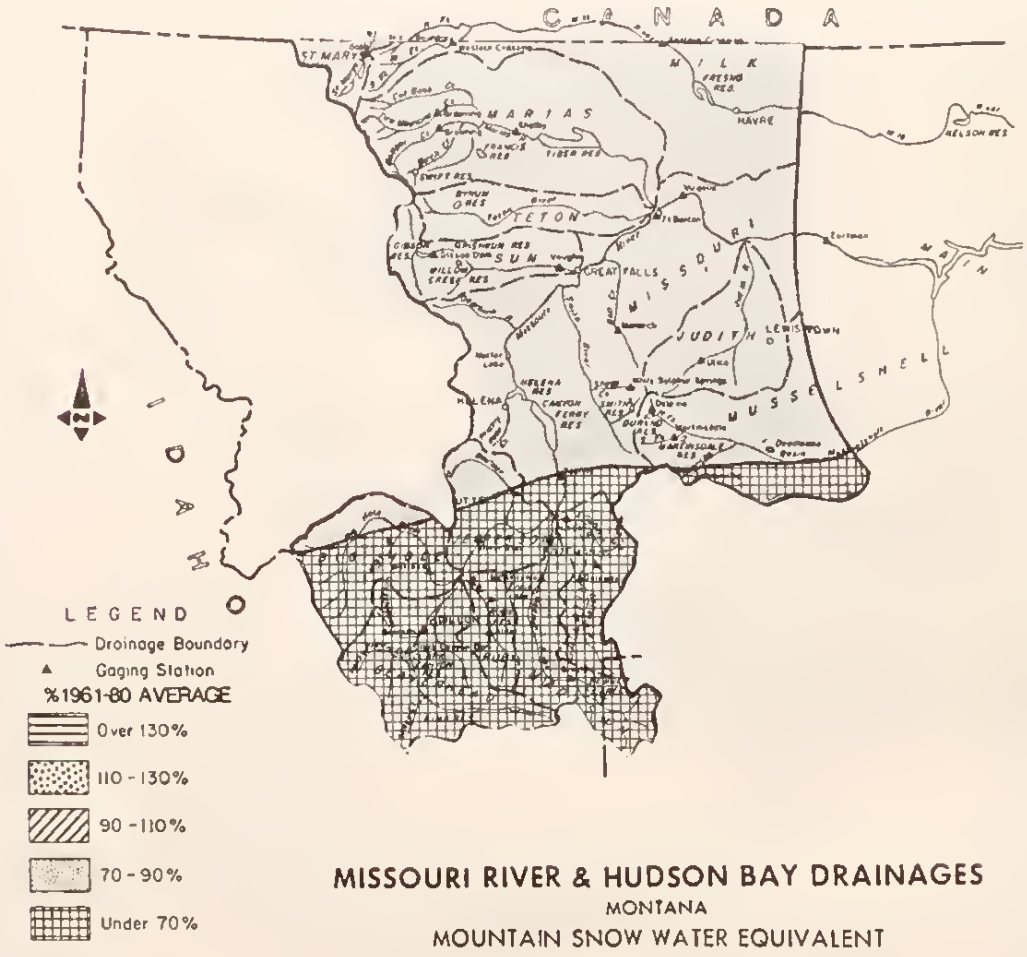
Snow melting early this year

The snowpack reached its season's maximum snow water content around the first week in April. Melt became quite rapid during mid-April and was followed by a fairly major storm that increased the snowpack. Since then, melt has been progressing well ahead of normal.

The May 1 snow surveys indicate less water content than on April 1 at almost all snow courses. A few locations in the southern part of the drainage have minimum of record or near record minimum snow water content for this date. In the northern part of the drainage, snowpack is generally 80 to 90 percent of average.

This early melt season appears to be 2 to 3 weeks earlier than usual.

If the present warm weather trend continues, the high country will be free of snow much earlier than usual.



MISSOURI RIVER & HUDSON BAY DRAINAGES
MONTANA
MOUNTAIN SNOW WATER EQUIVALENT

SUMMARY of SNOW MEASUREMENTS
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF: Last Year	Average
Beaverhead	28	50	60
Ruby	13	51	62
Big Hole	28	68	67
Boulder	14	46	53
Jefferson	83	56	63
Madison	31	65	66
Gallatin	22	58	58
Missouri Headwater	136	58	62
West-side Missouri (Toston-Cascade)	11	65	65
Smith-Belt-Arrow	11	22	72
Missouri Main-stem	22	30	69
Teton & Sun	12	173	80
Marias	6	137	86
Marias-Teton-Sun	18	152	83
Judith-Musselshell	17	68	70
Milk	10	201	90
Bear Paws	6	0	22
Missouri (Total)	203	60	66
Saskatchewan			
St. Mary's	11	160	91
Bow River in Alberta	10	117	91

Yellowstone River Drainage

STREAMFLOW FORECASTS

BASIN STREAM and or FORECAST POINT — May 1, 1985	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
PERIOD	MAY - SEPTEMBER				MAY - JULY			
YELLOWSTONE RIVER at Corwin Springs	1,600	82	1,918	1,944	1,348	84	1,543	1,602
YELLOWSTONE RIVER near Livingston	1,800	79		2,269	1,500	81		1,860
BOULDER RIVER at Big Timber	295	77		385	280	79		353
STILLWATER near Absarokee (1)	461	76		606	392	78		502
CLARKS FORK RIVER near Belfry	455	75		606	390	78		541
ROCK CREEK near Red Lodge	88.0	79		112	66.0	77		85.7
INFLOW COONEY RESERVOIR near Boyd (2)	40.8	79		51.5	31.7	78		40.5
YELLOWSTONE RIVER at Billings	3,217	76	4,017	4,255	2,675	75	3,348	3,571
BIGHORN RIVER near St. Xavier (3)	1,390	76	1,826	1,833	1,240	75	1,541	1,651
LITTLE BIGHORN RIVER near Hardin	94.3	60		157	82.5	60		137
TONGUE RIVER near Decker	155	64		244	142	65		218
YELLOWSTONE RIVER at Miles City (4)	4,585	73		6,273	3,935	73		5,391
POWDER RIVER at Moorhead	154	66		233	140	66		212
YELLOWSTONE RIVER near Sidney (5)	4,960	72		6,921	4,225	71		5,947

(1) Adjusted for storage in Mystic Lake.
(2) Adjusted for storage in Cooney Reservoir.
(3) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake, Pilot Butte and Bighorn Reservoirs.
(4) Adjusted for storage in Bull Lake, Buffalo Bill, Boysen, Pilot Butte, Bighorn and Tongue River Reservoirs.
(5) Adjusted for reservoirs shown in (4) and diversions into the Lower Yellowstone Canal.

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

STREAM or AREA	Flow Period: Spring Season	Flow Period: Late Season
Yellowstone at Livingston	Fair	Fair
Shields	Fair	Fair
Boulder	Fair	Fair
Sweetgrass - Big Timber	Fair	Fair
Stillwater	Fair	Fair
Rock Creek	Fair	Fair
Clark's Fork	Fair	Fair
Yellowstone above Bighorn	Fair	Fair
Bighorn	Fair	Fair
Little Bighorn	Fair	Poor
Tongue	Fair	Poor
Powder	Poor	Poor
Lower Yellowstone	Fair	Fair

PEAK FLOWS (MAXIMUM MEAN DAILY) (Av. flow for 24 hrs. on day of greatest flow)

FORECAST POINT	PEAK FLOW (SECOND FEET) Forecast Range	Average
Yellowstone River at Corwin Springs	13,000 - 15,000	18,790
Yellowstone River at Livingston	15,000 - 18,000	21,140
Boulder River near Big Timber	3,800 - 4,500	5,332
Stillwater River near Absarokee	4,000 - 5,500	6,644
Clarks Fork River near Belfry	5,300 - 6,500	7,611
Yellowstone River at Billings	33,000 - 40,000	43,365

*Highly abnormal weather during the critical melting period may cause the peak to be outside the indicated range

Average based on 1961-80 period.

Based on current weather and snowpack conditions, major streams in the Yellowstone River drainage are expected to reach their peak snowmelt runoff the first few days in June and the peak flow is expected to be below average.

April brings snowpack melt

Snow water content reached its seasonal maximum the first week in April. Unusually warm temperatures resulted in melt at almost all elevations. Some cooling and snow near mid-month increased the snowpack slightly and then melt resumed near the end of April.

This melt season seems to be 3 to 4 weeks earlier than normal, and if the warm temperatures continue, many high elevations will be snowfree much earlier than usual.

The snowpack is well below average in most areas.

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF: Last Year	Average +
Upper Yellowstone ab Livingston	18	78	63
Shields	10	56	59
Boulder & Stillwater	9	73	60
Rock Creek & Clark's Fork	17	64	61
Yellowstone (ab Bighorn River)	54	68	61
Bighorn/Wyoming	30	56	54
Little Bighorn	3	50	64
Tongue	9	55	66
Powder	5	37	38
Yellowstone (Total)	98	63	59

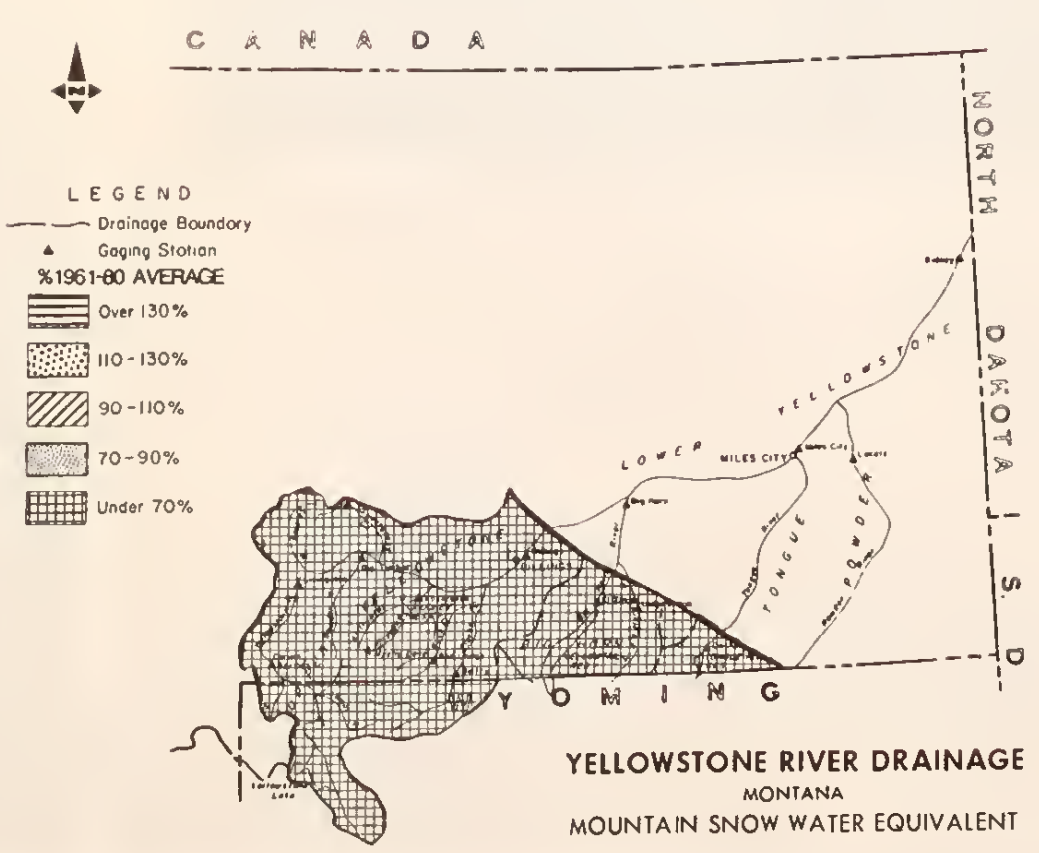
Low irrigation water supplies

April runoff was a little above average in the Upper Yellowstone, near average in most of the tributary streams and a little below average in the Lower Yellowstone.

May through September forecasts are generally in the 70 to 80 percent of average range.

Bare soils are drying quite rapidly due to the lack of precipitation and warm temperatures.

Irrigation water supplies are expected to be lower than normal because of low winter snowpack and earlier than normal melt. If moisture patterns do not improve, shortages of mid- to late season irrigation supplies could be moderate to severe on some of the smaller drainges.



YELLOWSTONE RIVER DRAINAGE
MONTANA
MOUNTAIN SNOW WATER EQUIVALENT

SNOW SURVEY DATA

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
MONTANA						
ABUNDANCE LAKE	8800	4/29/85	43	15.3	22.5	24.4
AMBROSE	6480	4/28/85	27	10.2	15.0	13.7
ARCH FALLS	7350	4/29/85	29	9.9	15.4	15.7
ASHLEY DIVIDE	4820	4/26/85	1	.4	.0	2.9
ASHLEY LAKE	4000	4/26/85	6	1.6	.0	3.0
BADGER PASS	6900	4/30/85	82	36.9	29.8	44.2
BADGER PASS BUTYL	6900	5/01/85	---	30.6	26.5	41.3
BALD EAGLE PEAK	5700	5/01/85	114	59.6	43.7	63.6
BALD RIDGE	7500	4/29/85	18	6.6	16.0	13.9
BANFIELD MOUNTAIN	5600	5/01/85	36	17.5	8.3	23.2
BANFIELD MTN BUTYL	5600	5/01/85	---	15.8	9.0	17.5
BAREE CREEK	5500	4/30/85	77	39.1	29.3	47.2
BAREE MIDWAY	4600	4/30/85	71	35.8	14.6	33.2
BAREE TRAIL	3800	4/30/85	3	1.1	.0	1.6
BARKER LAKES BUTYL	8250	5/01/85	---	15.3	18.1	17.1
BASIN CREEK	7180	5/01/85	0	.0	12.0	9.8
BASIN CREEK METAL	7180	5/01/85	---	7.9	12.2	9.6
BASSOO PEAK	5150	4/30/85	0	.0	.0	6.9
BEAGLE SPRINGS	8850	4/29/85	0	.0	13.2	8.0
BEAGLE SPGS METAL	8850	5/01/85	---	2.1	13.0	8.3
BEAR BASIN	8150	5/01/85	32	12.3	25.4	24.2
BEAR PAW SKI AREA	5200	4/29/85	0	.0	.0	5.4
BEAVER LAKE	5900	4/30/85	45	18.8	13.8	26.0
BIG CREEK	6750	5/01/85	89	45.0	43.2	52.0
BIG SKY	7700	5/01/85	28	11.5	18.4	18.1
BIG SKY MEADOW	6350	5/01/85	0	.0	5.2	4.6
BIG SNOWY	7150	4/26/85	63	24.0	29.2	26.4
BLACK BEAR	7950	4/26/85	90	39.6	40.4	44.8
BLACK BEAR BUTYL	7950	5/01/85	---	35.2	36.9	38.8
BLACK MOUNTAIN	7750	4/28/85	37	13.8	22.6	17.4
BLACK PINE	7100	4/26/85	29	9.0	10.4	14.9
BLACK PINE BUTYL	7100	5/01/85	---	7.5	13.3	15.6
BLOODY DICK	7600	4/30/85	22	8.1	13.0	14.1
BLOODY DICK BUTYL	7550	5/01/85	---	6.0	12.8	9.1
BLUE LAKE	5900	4/30/85	52	23.6	16.0	25.3
BOTS SOTS	7750	4/29/85	5	1.8	14.6	10.2
BOULDER MOUNTAIN	7950	4/25/85	55	20.4	23.6	22.9
BOULDER MTN BUTYL	7950	5/01/85	---	18.0	24.2	23.2
BOX CANYON	6670	4/30/85	9	2.4	6.6	8.3
BOX CANYON METAL	6700	5/01/85	---	.6	4.0	6.0
BRANHAM LAKES	8850	4/26/85	69	24.8	42.6	35.7
BRIDGER BOWL	7250	4/30/85	47	19.8	30.4	32.6
BRIDGER BOWL BUTYL	7250	4/30/85	---	17.8	30.0	30.3
BRISTOW CREEK	3900	5/01/85	0	.0	.0	1.7
BRUSH CREEK TIMBER	5000	4/29/85	10	3.3	1.5	7.7
BULL MOUNTAIN	6600	4/25/85	0	.0	5.3	3.7
CABIN CREEK	5200	4/28/85	5	1.4	.3	2.3
CALL ROAD	8050	4/29/85	25	7.7	16.2	14.2
CALVERT CREEK	6430	4/29/85	14	5.4	7.6	10.1
CALVERT CREEK BUTYL	6430	5/01/85	---	.0	1.7	2.8
CAMP MISERY	6400	5/01/85	109	52.5	58.0	53.7
CAMP SENIA	7890	4/29/85	11	3.2	12.7	10.0
CARROT BASIN BUTYL	9000	5/01/85	---	22.0	33.1	33.0
CASHE CREEK METAL	7800	5/01/85	---	6.7	11.2	9.5
CEDAR GROVE	3760	5/01/85	0	.0	.0	7.1
CHESSMAN RESERVOIR	6200	4/29/85	1	.2	3.4	2.8
CHICKEN CREEK	4060	4/24/85	17	6.5	.0	3.0
CLOVER MEADOW	8600	4/29/85	33	10.8	21.0	21.0
CLOVER MEADOW METAL	8800	5/01/85	---	13.0	24.9	18.2
COLE CREEK	7850	4/25/85	38	12.5	28.4	24.2
COLE CREEK BUTYL	7850	5/01/85	---	11.3	28.2	19.0
COLLEY CREEK	6300	4/26/85	5	1.3	3.3	4.6
COMBINATION	5600	4/26/85	6	1.4	2.3	3.6
COMBINATION BUTYL	5600	5/01/85	---	.0	.7	2.6
COOKE STATION	8150	4/30/85	42	16.2	16.6	22.2
COPPER BOTTOM	5200	4/30/85	0	.0	2.0	5.8
COPPER BOTTOM BUTYL	5200	5/01/85	---	6.6	5.2	7.1
COPPER CAMP BUTYL	6950	5/01/85	---	28.0	21.2	35.9
COPPER CAMP	6950	4/30/85	49	23.0	19.5	32.4
COPPER CREEK	5700	4/30/85	14	7.0	3.6	10.9
COPPER LAKE CREEK	6100	4/30/85	40	18.4	12.2	24.2
COPPER MOUNTAIN	7700	4/25/85	21	7.0	13.6	11.8
COTTONWOOD CREEK	6400	4/29/85	22	8.4	11.0	8.3
COYOTE HILL	4200	4/26/85	13	4.0	.0	3.6
CRYSTAL LAKE	6050	4/26/85	35	14.0	15.4	13.5
CRYSTAL LAKE METAL	6050	5/01/85	---	13.0	15.9	12.4
DAD CREEK LAKE	8400	4/29/85	36	10.6	19.8	17.4
DAISY PEAK	7600	4/30/85	14	3.3	8.4	10.9
DALY CREEK	5780	4/28/85	33	12.5	11.4	12.8
DALY CREEK METAL	5780	5/01/85	---	1.4	7.3	8.8
DARKHORSE LAKE	8600	4/29/85	59	24.9	33.4	30.4
DARKHORSE LK. METAL	8700	5/01/85	---	17.8	28.6	30.3
DAVIS CREEK	5400	5/01/85	34	16.9	12.3	24.0
DEADMAN CREEK	6450	4/30/85	13	5.2	6.6	9.5
DEADMAN CREEK BUTYL	6450	5/01/85	---	4.3	6.6	7.4
DESERT MOUNTAIN	5600	5/01/85	28	12.9	10.2	14.6
DEVILS SLIDE	8100	4/29/85	52	18.8	28.8	28.0
DISCOVERY BASIN	7050	4/30/85	16	5.1	13.0	10.6
DIVIDE	7800	4/29/85	11	3.5	13.4	11.7
DIVIDE BUTYL	7800	5/01/85	---	8.2	15.1	12.2
DIX HILL	6400	4/28/85	0	.0	8.4	5.4
DUPUYER CREEK BUTYL	5750	5/01/85	---	9.8	4.7	--
EAST BOULDER S	9250	5/01/85	63	25.0	28.0	35.0
EAST FORK R.S.	5400	4/25/85	0	.0	.0	.7
ELK HORN SPRINGS	7800	4/29/85	0	.0	9.0	9.1
ELK PEAK	8000	5/01/85	37	13.8	19.0	20.8
EMERY CREEK	4350	5/01/85	21	9.3	7.2	8.4
EMERY CREEK BUTYL	4350	5/01/85	---	12.4	6.1	6.9
FATTY CREEK	5500	5/01/85	45	20.8	20.4	25.2
FISH CREEK	8000	5/01/85	24	6.2	13.9	12.6
FISHER CREEK	9100	4/30/85	79	32.1	34.4	44.5
FISHER CREEK BUTYL	9100	5/01/85	---	28.1	31.4	40.7
FIVE-BULL	5700	4/30/85	0	.0	.3	4.5
FLATTOP MTN BUTYL	6300	5/01/85	---	44.5	32.9	52.8
FLEECER RIDGE	7500	4/25/85	21	6.0	9.0	9.9
FOOLHEN	8280	4/29/85	32	11.8	16.4	20.0
FOUR MILE	6900	4/25/85	20	6.4	12.6	8.1
FOURTH OF JULY	3450	4/29/85	0	.0	.0	3.2
FRED BURR PASS	8000	5/01/85	52	20.0	31.4	29.8
FREIGHT CREEK	6000	4/30/85	29	11.8	8.5	15.0
FRIDAY HILL	4620	4/29/85	34	15.8	6.7	11.1
FROHNER MEADOWS	6480	4/29/85	3	1.2	7.6	6.5
FROHNER MDWS BUTYL	6480	5/01/85	---	3.7	9.1	7.6
GARVER CREEK	4250	5/01/85	4	1.4	.0	5.2
GARVER CREEK BUTYL	4250	5/01/85	---	2.9	.0	4.3
GIBBONS PASS	7100	4/25/85	44	18.0	24.7	24.0
GOAT MOUNTAIN	7000	4/29/85	22	7.2	2.4	10.3
GOLD STONE	8100	4/30/85	36	13.6	17.6	19.6
GRASSHOPPER	7000	5/01/85	5	1.8	5.1	5.6
GRAVE CREEK	4300	5/01/85	22	10.9	5.3	15.1
GRAVE CRK BUTYL	4300	5/01/85	---	11.7	3.2	8.1
GRIFFIN CREEK DIVIDE	5150	4/30/85	10	3.9	3.5	7.9
GUNSIGHT LAKE	6300	5/01/85	76	37.8	32.4	43.9
HAND CREEK	5030	4/29/85	24	8.6	6.8	9.4
HAND CREEK BUTYL	5030	5/01/85	---	8.7	7.0	9.3
HAWKINS LAKE	6450	5/01/85	66	29.5	20.6	35.4
HAWKINS LAKE BUTYL	6450	5/01/85	---	24.2	19.0	33.1
HEART LAKE TRAIL	4800	4/29/85	49	22.4	11.3	18.4
HEBGEN DAM	6550	4/30/85	0	.0	10.8	7.6
HELL ROARING DIVIDE	5770	4/30/85	64	29.0	24.9	32.4
HERRIG JUNCTION	4850	4/24/85	57	22.6	14.7	22.3
HOLBROOK	4530	4/28/85	0	.0	.0	2.2
HOOD MEADOW	6600	4/29/85	8	3.0	11.6	12.3
HOODOO BASIN	6050	4/29/85	112	52.9	42.8	54.5
HOODOO BASIN BUTYL	6050	5/01/85	---	45.8	36.7	47.8
HOOOOO CREEK	5900	4/29/85	99	44.4	39.4	50.7
ICEBERG LAKE NO 3	5600	4/25/85	78	30.1	16.6	32.9
INDEPENDENCE	7850	4/30/85	33	12.3	13.4	19.3
INTERGAARD	6450	4/26/85	17	5.2	9.4	8.4
JAHNKE LAKE TRAIL	7200	4/30/85	16	6.4	8.6	9.2
JOHNSON PARK	6450	4/30/85	0	.0	.9	3.1
JOSEPHINE LOWER NO 9	4900	4/24/85	47	15.8	7.6	17.7
KEELER CREEK	3300	5/01/85	0	.0	.0	1.5
KINGS HILL	7500	4/30/85	36	13.9	15.0	16.7
KIWANIS CAMP	3720	4/29/85	0	.0	.0	.5
KRAFT CREEK METAL	4750	5/01/85	---	4.0	1.2	7.4
LAKE CREEK	6100	4/29/85	0	.0	6.4	3.8
LAKEVIEW CANYON	6930	4/25/85	28	8.7	9.6	12.6
LAKEVIEW RIDGE	7400	4/25/85	22	6.4	9.2	10.5
LAKEVIEW RDG. METAL	7400	5/01/85	---	4.6	12.8	8.9
LEMHI PASS	7480	4/29/85	0	.0	13.2	7.4
LEMHI RIDGE	8100	4/29/85	14	5.0	15.5	10.6
LEMHI RIDGE BUTYL	8100	5/01/85	---	5.8	15.5	10.6
LICK CREEK	6860	4/29/85	17	5.3	12.6	10.8
LICK CREEK BUTYL	6860	5/01/85	17	.8	12.4	8.3
LITTLE PARK	7400	5/01/85	29	10.0	18.6	18.4
LOGAN CREEK	4300	4/29/85	0	.0	.0	2.7
LONE MOUNTAIN	8880	5/01/85	42	17.0	29.0	27.0
LOST HORSE	5940	4/26/85	74	29.8	29.6	34.9
LOST SOUL	4800	5/01/85	10	4.7	.0	8.9
LOWER TWIN	7900	4/25/85	53	18.6	30.6	25.6
LOWER TWIN METAL	7900	5/01/85	---	15.1	27.7	23.8
LUBRECHT FLUME	4680	4/29/85	0	.0	.0	.2
LUBRECHT FLUME BUTYL	4680	5/01/85	---	.0	.0	.6
LUBRECHT FOREST NO 3	5450	4/29/85	0	.0	1.0	3.9
LUBRECHT FOREST NO 4	4650	4/29/85	0	.0	.0	.3
LUBRECHT FOREST NO 6	4040	4/29/85	0	.0	.0	.1
LUBRECHT HYDROPLOT	4200	4/29/85	0	.0	.0	.8
MADISON PLATEAU	7750	4/25/85	59	15.6	21.8	23.6
MADISON PLT BUTYL	7750	4/25/85	---	23.0	19.0	24.3
MANY GLACIER	4900	4/30/85	35	14.8	8.0	9.8
MANY GLACIER BUTYL	4900	5/01/85	---	6.6	.1	7.6
MARIAS PASS	5250	4/28/85	37	16.1	7.6	16.8
MAYNARD CREEK	6210	4/30/85	30	12.0	16.0	18.0
MAYNARD CREEK BUTYL	6210	4/30/85	---	9.8	13.2	14.4
MIDDLE MILL CREEK	7850	4/26/85	29	9.9	26.0	18.5
MILL CREEK	7500	4/26/85	18	5.6	10.8	13.1
MINERAL CREEK	4000	4/28/85	31	13.4	3.6	12.3
MONUMENT PEAK	8850	4/30/85	57	20.7	24.7	31.2
MONUMENT PEAK METAL	8850	5/01/85	---	17.2	21.0	29.0
MOULTON RESERVOIR	6850	5/02/85	0	.0	6.5	3.2
MOUNT ALLEN NO 7	5700	4/24/85	113	42.1	32.7	47.7
MOUNT LOCKHART	6400	4/30/85	48	20.0	15.6	23.3
MT LOCKHART BUTYL	6400	5/01/85	---	18.9	15.0	24.3
MUDD LAKE	7650	4/29/85	31	13.5	16.7	21.1
MULE CREEK	8300	4/29/85	37	12.0	13.0	11.5
MULE CREEK METAL	8300	5/01/85	---	13.9	13.8	17.6
NEVADA CREEK	6480	4/30/85	21	9.5	11.2	12.0
NEVADA CREEK METAL	6480	5/01/85	---	12.2	8.5	13.8
NEWTON MOUNTAIN	5600	4/29/85	71	33.8	24.4	38.9
NEZ PERCE CAMP	5650	4/25/85	30	11.2	12.4	12.7
NEZ PERCE CMP BUTYL	5650	5/01/85	---	8.7	12.7	10.2
NEZ PERCE CREEK	6600	4/25/85	0	.0	4.9	4.5
NEZ PERCE PASS	6570	4/25/85	22	8.2	17.8	15.9
NOISY BASIN	6040	5/01/85	105	52.5	56.7	52.4
NOISY BASIN BUTYL	6040	5/01/85	---	47.5	52.3	44.8
NORTH FORK ELK CREEK	6250	4/29/85	15	5.7	11.8	10.5
N.FORK ELK CRK BUTYL	6250	5/01/85	---	4.0	10.2	10.0
NORTH FORK JOCKO	6330	5/01/85	70	34.5	39.4	48.3
NORTH MEADOW	7500	4/25/85	27	8.8	14.7	10.7
NORTHEAST ENTRANCE	7350	4/30/85	4	1.6	4.1	7.3
N.E. ENTRANCE BUTYL	7350	5/01/85	---	.0	5.5	5.3
NOTCH	8500	4/29/85	34	12.3	28.0	19.6
OPHIR PARK	7150	4/28/85	40	15.2	19.6	18.1
PALISADE CREEK	8250	4/29/85	56	26.8	28.8	33.1
PETERSON MEADOWS	7200	4/30/85	22	8.0	15.0	11.7
PETERSON MDW BUTYL	7200	4/30/85	---	9.3	15.0	12.2
PICKET PIN O	9450	5/01/85	39	15.5	27.5	30.6
PICKFOOT CREEK	6650	4/25/85	13	4.3	5.3	8.0
PICKFOOT CRK METAL	6650	5/01/85	---	1.0	6.8	10.0
PIEGAN PASS NO 6	5500	4/24/85	101	37.1	26.2	41.0
PIKE CREEK	5930	4/30/85	62	28.0	--	--
PIKE CREEK BUTYL	5930	5/01/85	---	26.7	17.6	27.5
PIPESTONE PASS	7200	4/25/85	14	4.8	7.0	5.8
PLACER BASIN F	8830	5/01/85	37	14.5	21.5	24.0
PLACER BASIN METAL	8830	5/01/85	---	13.2	18.7	20.4
POORMAN CREEK	5100	5/01/85	59	30.3	21.5	32.5
POORMAN CRK BUTYL	5100	5/01/85	---	31.4	19.2	31.1
PORCUPINE BUTYL	6500	5/01/85	---	.0	5.4	2.7
POTOMAGETON PARK	7150	4/29/85	0	.0	11.6	11.4
PTARMIGAN	5800	4/25/85	87	32.6	21.9	40.0
RED MOUNTAIN	6000	5/01/85	32	13.4	10.9	19.4
RED TOP	5260	4/29/85	60	27.8	18.2	31.9

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
ROCK CREEK	5600	4/26/85	29	11.2	11.3	8.6
ROCK CREEK MEADOW	8160	4/25/85	53	16.6	21.3	25.4
ROCKER PEAK	8000	4/26/85	36	11.8	15.4	17.5
ROCKER PEAK BUTYL	8000	5/01/85	---	13.0	14.6	18.7
ROCKY BOY	4700	4/29/85	---	.0	.0	2.3
ROCKY BOY BUTYL	4700	4/29/85	---	1.5	.0	2.6
SACAJAWEA	6550	4/30/85	17	5.4	15.8	14.8
SADDLE MOUNTAIN	7940	4/25/85	60	23.6	28.4	28.7
SADDLE MTN BUTYL	7900	5/01/85	---	20.0	27.8	28.3
SENTINEL CREEK	8300	4/29/85	41	15.0	23.6	27.0
SHOWER FALLS	8100	4/29/85	54	19.7	30.4	29.5
SHOWER FALLS BUTYL	8100	5/01/85	---	19.4	32.6	29.2
SILVER RUN	6630	4/29/85	0	.0	10.7	3.3
SILVER RUN BUTYL	6630	5/01/85	---	.0	6.9	.0
SKALKAHO SUMMIT	7250	4/28/85	52	22.2	22.7	28.3
SKALKAHO SUMMIT BTYL	7260	5/01/85	---	19.9	21.8	27.2
SKYLARK TRAIL METAL	6200	5/01/85	---	26.8	28.4	37.1
SLAG-A-MELT LAKE	8750	4/29/85	46	21.6	31.0	28.7
SLIDE ROCK MOUNTAIN	7100	4/25/85	39	13.1	16.9	19.4
SMUGGLER MINE	6960	4/26/85	18	5.6	13.8	10.3
SOUTH FORK SHIELDS	8100	4/29/85	52	20.4	34.6	29.6
S.FK. SHIELDS BUTYL	8100	5/01/85	---	13.9	24.7	22.0
SPOTTED BEAR MTN.	7000	5/01/85	19	9.9	8.1	10.8
SPUR PARK	8100	4/30/85	51	20.0	22.2	24.8
SPUR PARK BUTYL	8100	5/01/85	---	21.5	23.0	24.4
STAHL PEAK	6030	5/01/85	84	40.4	33.7	45.2
STAHL PEAK BUTYL	6030	5/01/85	---	33.9	30.8	37.7
STAR LAKE E	9650	5/01/85	77	33.0	37.5	50.0
STEMPLE PASS	6600	4/28/85	33	10.2	8.4	11.6
STORM LAKE	7780	4/30/85	28	9.8	19.2	16.4
STRYKER BASIN	6180	4/24/85	75	29.2	28.6	38.2
STUART MILL	6500	4/26/85	4	1.0	6.8	4.8
STUART MOUNTAIN	7400	4/30/85	56	27.2	33.7	34.6
SUCKER CREEK	3960	4/29/85	0	.0	.0	.5
TAYLOR ROAD	4080	4/29/85	0	.0	.0	1.1
TEN MILE LOWER	6600	4/30/85	8	2.1	7.4	6.3
TEN MILE MIDDLE	6800	4/30/85	26	8.8	13.6	13.5
TEN MILE UPPER	8000	4/30/85	29	10.0	17.6	16.4
TEPEE CREEK	8000	4/29/85	38	12.3	19.0	17.8
TEPEE CREEK BUTYL	8000	5/01/85	---	9.4	16.5	13.7
TIMBERLINE CREEK	8850	4/27/85	39	11.2	20.3	19.5
TRAIL CREEK	7090	4/29/85	0	.0	12.2	7.9
TRINKUS LAKE	6100	5/01/85	77	40.7	40.4	45.6
TRUMAN CREEK	4060	4/26/85	0	.0	.0	.0
TV MOUNTAIN	6800	4/30/85	35	15.0	20.0	20.7
TWELVEMILE CREEK	5600	4/26/85	42	16.0	14.6	16.7
TWELVEMILE BUTYL	5600	5/01/85	---	6.7	11.0	14.5
TWENTY-ONE MILE	7150	5/02/85	20	7.6	12.9	17.2
TWIN CREEKS	3580	5/01/85	0	.0	.0	2.3
TWIN LAKES	6510	4/26/85	94	40.0	38.8	46.5
TWIN LAKES BUTYL	6400	5/01/85	---	32.6	33.5	42.9
UPPER HOLLAND LAKE	6200	5/01/85	72	33.2	30.8	38.0
WALORON	5600	4/30/85	13	4.2	2.2	5.9
WALORON BUTYL	5600	5/01/85	---	5.9	3.7	7.1
WARM SPRINGS	7800	5/01/85	39	14.0	22.2	22.3
WARM SPRINGS BUTYL	7800	5/01/85	---	16.9	24.5	27.0
WEASEL DIVIDE	5450	5/01/85	73	35.0	21.2	35.8
WEST YELLOWSTONE	6700	5/02/85	13	5.0	7.5	8.3
WEST YELL'ST BUTYL	6700	5/02/85	---	3.2	6.4	6.9
WHISKEY CREEK	6800	4/25/85	38	14.0	16.0	19.3
WHISKEY CREEK BUTYL	6800	5/01/85	---	15.9	14.0	15.6
WHITE MILL	8700	4/30/85	58	23.1	24.3	31.5
WHITE MILL BUTYL	8700	5/01/85	---	22.8	21.9	27.1
WHITE PINE RIDGE	8850	4/29/85	0	.0	11.3	6.5
WILLOW CREEK	6500	4/25/85	0	.0	12.6	5.4
WOOD CREEK	5960	4/30/85	20	8.4	3.3	9.8
WOOD CREEK METAL	5960	5/01/85	---	12.6	4.9	12.7
WRONG CREEK	5700	4/26/85	24	9.7	2.8	11.3
WRONG RIDGE	6800	4/27/85	50	17.7	8.9	20.9
ALBERTA						
AKAMINA CAN.	5810	4/30/85	50	20.1	14.6	17.6
ALLISON PASS CAN.	6490	4/30/85	50	17.8	13.1	--
BOW RIVER SUMMIT CAN.	6660	4/30/85	46	14.9	12.3	13.9
CUTHEAD LAKE CAN.	7250	4/30/85	42	13.3	13.1	15.6
HIGHWOOD SUMMIT CAN.	7250	4/30/85	56	18.1	14.1	18.1
GABLE MOUNTAIN CAN.		4/30/85	21	6.4	--	--
GARDINER HEAD. CAN.		4/30/85	71	31.7	--	--
KATHERINE LAKE CAN.	7810	4/30/85	55	16.4	--	--
LARCH VALLEY CAN.	7740	4/30/85	50	15.0	16.4	18.6
LOST CREEK CAN.		4/30/85	73	25.0	--	--
LT. ELBOW SUMM CAN.	7090	4/30/85	54	16.1	11.3	13.3
MARMOT-JASPER CAN.		4/30/85	31	9.5	--	8.9
MCCONNELL CREEK CAN.		4/30/85	20	7.0	--	--
MIST CREEK CAN.	5740	4/30/85	12	4.1	1.5	7.0
MOUNT SKOKI CAN.	6740	4/30/85	44	13.1	12.8	14.1
MUD LAKE CAN.	6200	4/30/85	41	14.4	9.5	14.1
NIGEL CREEK CAN.	6400	4/30/85	50	14.6	--	16.7
PTARMIGAN HUT CAN.	7150	4/30/85	46	14.7	13.6	15.6
RACEHORSE CREEK CAN.		4/30/85	52	19.3	--	--
SUNSHINE VILLAGE CAN.	7300	4/30/85	65	21.8	20.0	25.5
SUNWAPTA FALLS CAN.	4590	4/30/85	18	5.1	--	6.2
TENT RIDGE CAN.		4/30/85	46	15.1	--	--
W.CASTLE (BUSH) CAN.	4990	4/30/85	67	23.5	6.6	--
BRITISH COLUMBIA						
BEAVER FOOT CAN.	6200	4/29/85	27	7.3	4.2	9.6
FERNIE CAN.	3500	4/30/85	0	.0	.0	2.4
FERNIE EAST(NEW) CAN.	4100	4/30/85	26	10.7	3.6	10.0
FERNIE NE CAN.	3500	4/30/85	7	2.5	.0	4.1
FIDELITY MTN. CAN.	6100	4/29/85	124	44.0	41.4	54.6
FLOE LAKE CAN.	6860	4/29/85	81	27.9	25.4	32.4
GLACIER CAN.	4100	4/30/85	61	28.6	21.9	29.3
LOWER KIMBERELY CAN.	4500	4/29/85	0	.0	.0	1.3
KIMBERLEY MID. CAN.	5510	4/29/85	18	6.1	6.5	11.1
UPPER KIMBERLEY CAN.	7020	4/29/85	46	15.5	14.0	23.6
MARBLE CANYON CAN.	4990	4/30/85	26	9.6	7.8	12.3
MORRISSEY RIDGE CAN.	6100	4/30/85	59	27.0	19.5	29.3
MOUNT ABBOT CAN.	6500	4/29/85	128	49.3	47.2	55.7
MT ASSINIBOINE CAN.	7320	4/29/85	63	18.4	19.4	23.3
MOUNT JOFFRE CAN.	5740	4/29/85	44	13.0	99.1	15.1
MOYIE MTN CAN.	6400	4/30/85	38	15.1	12.2	19.2
SINCLAIR PASS CAN.	4500	4/29/85	10	3.2	.0	2.4
SULLIVAN MINE CAN.	5090	4/30/85	19	7.4	5.4	12.0
THUNDER CREEK CAN.	6600	4/29/85	41	11.4	7.1	12.5
VERMONT CREEK CAN.	4990	4/29/85	35	12.2	55.5	20.6

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
IDAHO						
BEAR MOUNTAIN	5400	5/01/85	108	60.6	42.6	64.2
BEAR MTN SNOTEL	5400	5/01/85	---	65.2	--	--
BIG SPRINGS	6400	4/30/85	24	10.3	17.0	17.0
CRAB CREEK SNOTEL	6860	5/01/85	---	10.3	--	--
GOAT LAKE	6500	4/29/85	100	49.0	37.7	50.2
HUMBOLDT GULCH	4250	4/30/85	27	11.9	4.6	--
HUMBOLDT GLCH SNOTEL	4250	5/01/85	---	8.6	--	--
ISLAND PARK	6290	4/30/85	14	5.9	11.4	11.0
ISLAND PARK SNOTEL	6290	5/01/85	---	10.2	--	--
LOLO PASS	5240	4/30/85	50	24.8	18.6	30.0
LOLO PASS SNOTEL	5240	5/01/85	---	24.8	--	--
LOOKOUT	5140	4/30/85	68	34.6	23.8	33.7
MOOSE CREEK	6200	4/29/85	25	9.2	17.8	14.6
MOSQUITO SNOTEL	5200	5/01/85	---	34.4	--	--
SAVAGE PASS	6170	4/30/85	58	24.6	22.6	28.5
SAVAGE PASS SNOTEL	6170	5/01/85	---	25.0	--	--
SAWTELL MOUNTAIN	8720	4/30/85	74	33.7	39.5	38.5
SMITH CREEK	4800	5/02/85	75	38.4	33.9	45.7
SUNSET SNOTEL	5540	5/01/85	---	33.7	--	--
TARGHEE PASS	6980	4/30/85	---	7.5E	14.3	13.2
VALLEY VIEW	6680	4/30/85	19	7.2	11.4	13.2
WHITE ELEPHANT	7710	4/30/85	43	16.8	23.9	25.7
WHITE ELEPHANT SNTEL	7710	5/01/85	---	20.1	--	26.6
WYOMING						
BALD MOUNTAIN	9380	4/25/85	58	18.7	34.2	29.4
BALD MOUNTAIN SNOTEL	9380	5/01/85	---	15.7	--	--
BEARTOOTH LK. SNOTEL	9280	5/01/85	---	16.3	19.3	--
BURGESS RANGER STA	7880	4/30/85	21	6.0	15.3	9.9
BURGESS JCT. SNOTEL	7880	5/01/85	---	10.6	19.0	--
CANYON (OISC.)	7940	4/30/85	30	11.3	9.2	15.4
CANYON SNOTEL	7940	5/01/85	---	8.1	9.2	15.4
EAST ENTRANCE	6960	4/30/85	0	.0	.8	3.0
EVENING STAR SNOTEL	9200	5/01/85	---	24.9	--	--
LAKE CAMP	7780	4/29/85	19	6.4	5.7	8.1
LUPINE CREEK	7380	5/02/85	8	2.6	7.1	8.1
NORRIS BASIN (OLD)	7500	4/30/85	7	2.5	5.2	7.7
NORRIS BASIN (NEW)	7500	4/30/85	13	4.7	4.9	--
NORTH TONGUE	8450	4/30/85	34	10.0	19.4	15.3
OLD FAITHFUL	7400	5/01/85	26	10.2	9.2	11.6
PARKERS PEAK SNOTEL	9400	5/01/85	---	18.0	20.0	--
SYLVAN LAKE SNOTEL	8420	4/30/85	0	.0	21.2	--
SYLVAN PASS	7100	4/30/85	0	.0	4.5	9.6
TOGWOTEE PASS	9580	4/30/85	56	22.0	30.4	33.8
TOGWOTEE PASS SNOTEL	9580	5/01/85	---	19.9	26.5	--
TROUT CREEK SNOTEL	8400	5/01/85	---	3.7	8.9	--
TWO OCEAN SNOTEL	9160	5/01/85	---	26.4	26.8	--
WOLVERINE	7650	4/29/85	14	4.6	6.5	11.6
WOLVERINE SNOTEL	7650	5/01/85	---	3.2	6.1	--
YOUNTS PEAK AM	8350	4/30/85	33	10.0	--	--

Irrigation season has begun earlier than usual due to warm temperatures and below average moisture.

****

1935-1985

50 Years of Soil and Water Conservation

Columbia River Drainage

STREAMFLOW FORECASTS May 1, 1985

BASIN, STREAM and/or FORECAST POINT	PERIOD	THIS YEAR FORECAST (Thousand Acre Feet)	THIS YEAR FORECAST (Percent of Average)	POST RECORD THOUSAND ACRE FEET (Last Year)	POST RECORD THOUSAND ACRE FEET (Average)
KOOTENAI RIVER below Libby Dam (1)	MAY - SEPTEMBER	5430	82	5,092	6,590
FISHER RIVER near Libby		192	99		194
YAAK RIVER near Troy		360	86		418
KOOTENAI RIVER at Leonia (1)		6540	83	5,932	7,838
INFLOW MOULTON RESERVOIR nr Butte (Million Gallons)					
WARM SPRINGS CREEK AT MEYERS DAM near Anaconda (2)		36.0	82		44.2
FLINT CREEK near Southern Cross (3)		12.0	74		16.1
FLINT CREEK below Boulder Creek (4)		52.0	76		68.3
INFLOW LOWER WILLOW CREEK RESERVOIR near Hall (5)		8.1	61	15.8	13.2
MIDDLE FORK ROCK CREEK near Philipsburg		58.0	78		74.0
NEVADA CREEK near Finn		12.0	63		19.0
BLACKFOOT RIVER near Bonner		700	79		881
CLARK FORK RIVER above Milltown (6)		569	79		709
CLARK FORK RIVER above Missoula		1270	80	1,367	1,590
WEST FORK BITTERROOT RIVER near Conner (7)		127	79		160
BITTERROOT RIVER near Darby		429	82		524
SKALKAHO CREEK near Hamilton		41.5	78		53.0
BURNT FORK CREEK near Stevensville (8)		27.5	79		35.3
BITTERROOT RIVER at Missoula (9)		1070	79		1,358
CLARK FORK RIVER below Missoula		2340	79		2,948
CLARK FORK RIVER at St. Regis		3070	79	3,289	3,880
NORTH FORK FLATHEAD RIVER near Columbia Falls		1520	87		1,742
MIDDLE FORK FLATHEAD RIVER near West Glacier		1500	88	1,148	1,702
SOUTH FORK FLATHEAD RIVER near Columbia Falls (10)		1810	89	1,570	2,029
FLATHEAD RIVER at Columbia Falls (10)		4900	87	4,154	5,604
SWAN RIVER near Big Fork		525	88		599
FLATHEAD RIVER near Polson (11)		5740	88	4,846	6,522
CLARK FORK RIVER near Plains (11)		9320	86	8,672	10,821
THOMPSON RIVER near Thompson Falls		201	93		217
PROSPECT CREEK at Thompson Falls		110	97		113
CLARK FORK RIVER at Whitehorse Rapids (12)		10500	88		11,935

BASIN, STREAM and/or FORECAST POINT	PERIOD	THIS YEAR FORECAST (Thousand Acre Feet)	THIS YEAR FORECAST (Percent of Average)	POST RECORD THOUSAND ACRE FEET (Last Year)	POST RECORD THOUSAND ACRE FEET (Average)
KOOTENAI RIVER below Libby Dam (1)	MAY - JULY	4590	82	4,146	5,569
FISHER RIVER near Libby		177	99		178
YAAK RIVER near Troy		339	86		395
KOOTENAI RIVER at Leonia (1)		5600	83	4,994	6,734
INFLOW MOULTON RESERVOIR nr Butte (Million Gallons)		180	81	188	223
WARM SPRINGS CREEK AT MEYERS DAM near Anaconda (2)		28.5	80		35.3
FLINT CREEK near Southern Cross (3)		9.6	74		13.0
FLINT CREEK below Boulder Creek (4)		39.5	76		52.0
INFLOW LOWER WILLOW CREEK RESERVOIR near Hall (5)		7.6	61	14.5	12.4
MIDDLE FORK ROCK CREEK near Philipsburg		51.7	78		66.3
NEVADA CREEK near Finn		10.8	63		17.2
BLACKFOOT RIVER near Bonner		620	79		786
CLARK FORK RIVER above Milltown (6)		474	79		601
CLARK FORK RIVER above Missoula		1109	80	1,162	1,387
WEST FORK BITTERROOT RIVER near Conner (7)		115	79		146
BITTERROOT RIVER near Darby		385	81		476
SKALKAHO CREEK near Hamilton		35.7	78		45.8
BURNT FORK CREEK near Stevensville (8)		32.9	79		30.2
BITTERROOT RIVER at Missoula (9)		980	79		1,238
CLARK FORK RIVER below Missoula		2090	80		2,625
CLARK FORK RIVER at St. Regis		2710	79	2,879	3,451
NORTH FORK FLATHEAD RIVER near Columbia Falls		1360	87		1,562
MIDDLE FORK FLATHEAD RIVER near West Glacier		1360.	88	1,068	1,546
SOUTH FORK FLATHEAD RIVER near Columbia Falls (10)		1690.	89	1,448	1,893
FLATHEAD RIVER at Columbia Falls (10)		4545	89	3,714	5,117
SWAN RIVER near Big Fork		452	88		514
FLATHEAD RIVER near Polson (11)		5220	88	4,363	5,956
CLARK FORK RIVER near Plains (11)		8370	86	7,692	9,739
THOMPSON RIVER near Thompson Falls		175	93		189
PROSPECT CREEK at Thompson Falls		100	97		104
CLARK FORK RIVER at Whitehorse Rapids (12)		9370	87		10,711

BASIN, STREAM and/or FORECAST POINT	PERIOD	THIS YEAR FORECAST (Thousand Acre Feet)	THIS YEAR FORECAST (Percent of Average)	POST RECORD THOUSAND ACRE FEET (Last Year)	POST RECORD THOUSAND ACRE FEET (Average)
KOOTENAI RIVER below Libby Dam (1)	MAY - JUNE				
FISHER RIVER near Libby					
YAAK RIVER near Troy					
KOOTENAI RIVER at Leonia (1)		4390	83	3,679	5,288
INFLOW MOULTON RESERVOIR nr Butte (Million Gallons)		159	81	180	197
WARM SPRINGS CREEK AT MEYERS DAM near Anaconda (2)					
FLINT CREEK near Southern Cross (3)					
FLINT CREEK below Boulder Creek (4)					
INFLOW LOWER WILLOW CREEK RESERVOIR near Hall (5)					
MIDDLE FORK ROCK CREEK near Philipsburg					
NEVADA CREEK near Finn					
BLACKFOOT RIVER near Bonner		525	79		664
CLARK FORK RIVER above Milltown (6)		390	80		490
CLARK FORK RIVER above Missoula		925.	80	956	1,154
WEST FORK BITTERROOT RIVER near Conner (7)					
BITTERROOT RIVER near Darby		330	81		408
SKALKAHO CREEK near Hamilton					
BURNT FORK CREEK near Stevensville (8)					
BITTERROOT RIVER at Missoula (9)		825	79		1,046
CLARK FORK RIVER below Missoula		1750	80		2,200
CLARK FORK RIVER at St. Regis		2290	79	2,382	2,896
NORTH FORK FLATHEAD RIVER near Columbia Falls		1130	87		1,301
MIDDLE FORK FLATHEAD RIVER near West Glacier		1135	88	918	1,287
SOUTH FORK FLATHEAD RIVER near Columbia Falls (10)		1100	89	1,237	1,636
FLATHEAD RIVER at Columbia Falls (10)		3840	89	3,004	4,317
SWAN RIVER near Big Fork					
FLATHEAD RIVER near Polson (11)		4400	88	3,545	5,002
CLARK FORK RIVER near Plains (11)		6990	86	6,235	8,127
THOMPSON RIVER near Thompson Falls					
PROSPECT CREEK at Thompson Falls					
CLARK FORK RIVER at Whitehorse Rapids (12)		7770	87		8,930

(1) Adjusted for storage in Lake Koocanusa.
(2) Adjusted for storage in Silver Lake, diversions to and pumping from Georgetown Lake.
(3) Adjusted for storage in Georgetown Lake, diversions from and pumping to Silver Lake.
(4) Sum Flint Creek at Maxville and Boulder Creek at Maxville.
(5) Sum of North Fork Lower Willow Creek near Hall and South Fork Lower Willow Creek near Hall.
(6) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.
(7) Adjusted for storage in Painted Rocks Reservoir
(8) Adjusted for diversion into Sunset Highline Canal.
(9) Difference in observed flow Clark Fork above and below Missoula.
(10) Adjusted for storage in Hungry Horse Reservoir.
(11) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
(12) Adjusted for storage in Hungry Horse Reservoir, Flatbead Lake and Noxon Rapids Reservoir.

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF (Last Year)	THIS YEAR'S SNOW WATER AS PERCENT OF (Average †)
East Kootenay/BC.	20	79	81
Kootenai/Montana	31	150	87
Kootenai above Bonners Ferry...	51	115	85
Little Bitterroot	9	141	53
N. Fk. Flathead..	12	135	90
M. Fk. Flathead..	12	139	88
S. Fk. Flathead..	13	100	92
Swan	11	97	89
Flathead	56	114	89
Stillwater & Whitefish.....	9	129	84
Clark Fork above Blackfoot	43	62	64
Blackfoot	22	90	70
Upper Clark Fork above Missoula .	65	70	66
Bitterroot	20	87	78
Lower Clark Fork below Missoula .	18	132	91
Clark Fork (Total w/o Flathead)...	103	90	77
Pend O'Reille (Clark Fork & Flathead)	159	100	82
Columbia (Pend O'Reille & Kootenai)	210	103	83

PEAK FLOWS (MAXIMUM MEAN DAILY) (Av. flow for 24 hrs. on day of greatest flow)

FORECAST POINT	PEAK FLOW (SECOND FEET) Forecast Range	PEAK FLOW (SECOND FEET) Average
Blackfoot River near Bonner	6,500 - 8,500	10,332
Clark Fork River above Missoula	11,000 - 14,000	16,804
Bitterroot River near Darby	5,000 - 6,500	6,312
Clark Fork River below Missoula	20,000 - 28,000	32,016
Clark Fork River at St. Regis	28,000 - 35,000	40,305
N. Fk Flathead near Columbia Falls	14,000 - 18,000	22,086
M. Fk. Flathead near West Glacier	15,000 - 19,000	23,534

'Highly abnormal' weather during the critical melting period may cause the peak to be outside the indicated range

Average based on 1961-80 period.

The Blackfoot and Clark Fork Rivers are expected to reach their snowmelt peak around May 20 based on current weather and snowpack conditions. The Bitterroot River and North and Middle Forks of Flathead River should peak a few days to a week later.

Columbia snowpack is below average

Only a few high elevation snow courses showed increases in water content during April. Melt rates were quite high for this early in the season.

The northern drainages continue to show better snowpack with water contents at higher elevations in the 80 to 90 percent of average range. The Bitterroot, Clark Fork and Blackfoot have a little lower snowpack with most snow courses showing 70 to 80 percent of average water content.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

STREAM or AREA	Flow Period: Spring Season	Flow Period: Late Season
Tobacco	Avg	Avg
Little Bitterroot....	Avg	Avg
Mission Valley	Avg	Avg
Flint Creek	Fair	Fair
Upper Clark Fork	Fair	Fair
Nevada Creek	Fair	Fair
Blacktoot	Fair	Fair
West-side Bitterroot	Fair	Fair
East-side Bitterroot	Fair	Fair
Bitterroot River	Fair	Fair
Lower Clark Fork	Fair	Fair

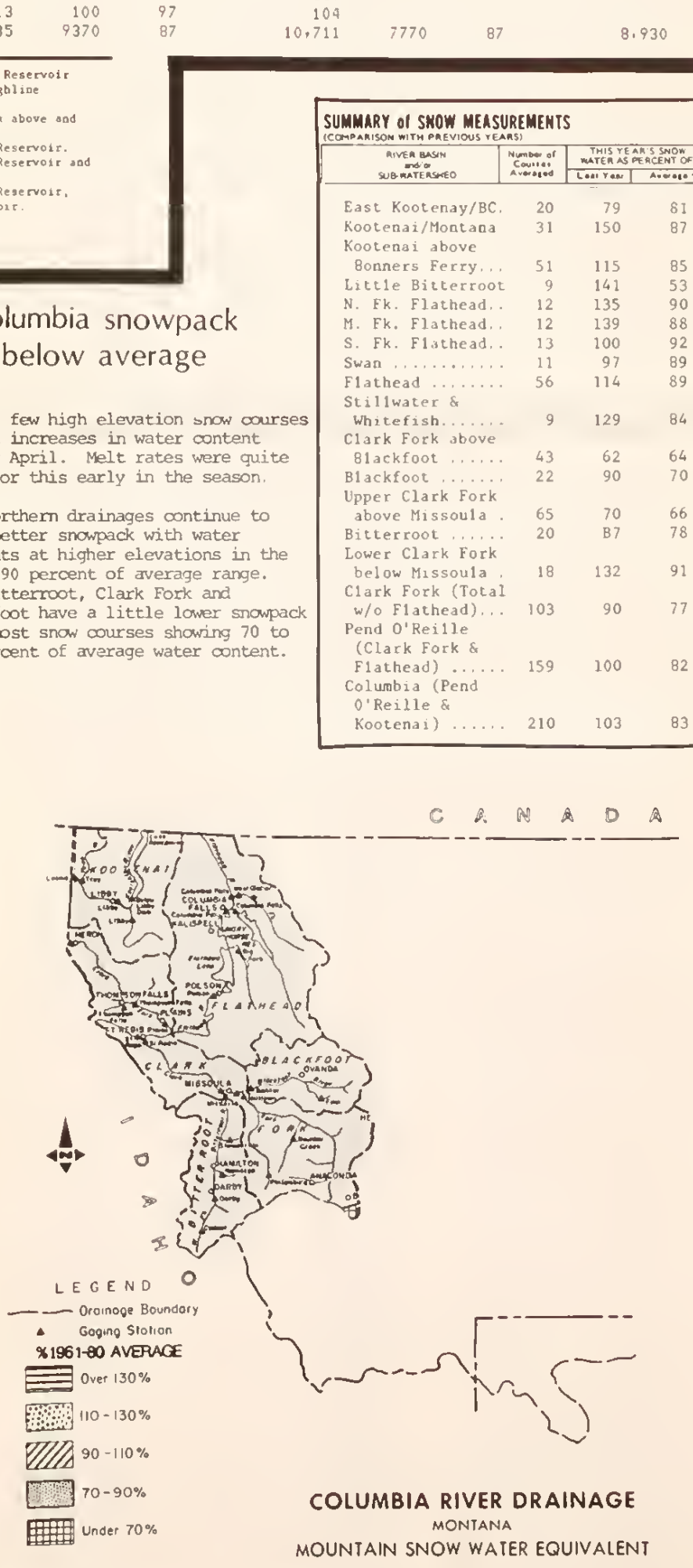
Early runoff highly variable

April runoff was 10 to 20 percent below average in the Upper Clark Fork and Blackfoot, near average to a little above on the Lower Clark Fork, about 15 percent above average in the Bitterroot and North Fork Flathead, and 25 to 30 percent above average for the Middle and South Fork Flathead. Smaller streams with lower elevation headwaters generally produced well above average runoff.

May through September runoff is forecast to be around 70 to 80 percent of average in the Clark Fork drainage. In the Flathead River drainage, runoff is expected to be 10 to 15 percent below average. The Fisher, Thompson and Prospect are all forecast to have near average streamflows.

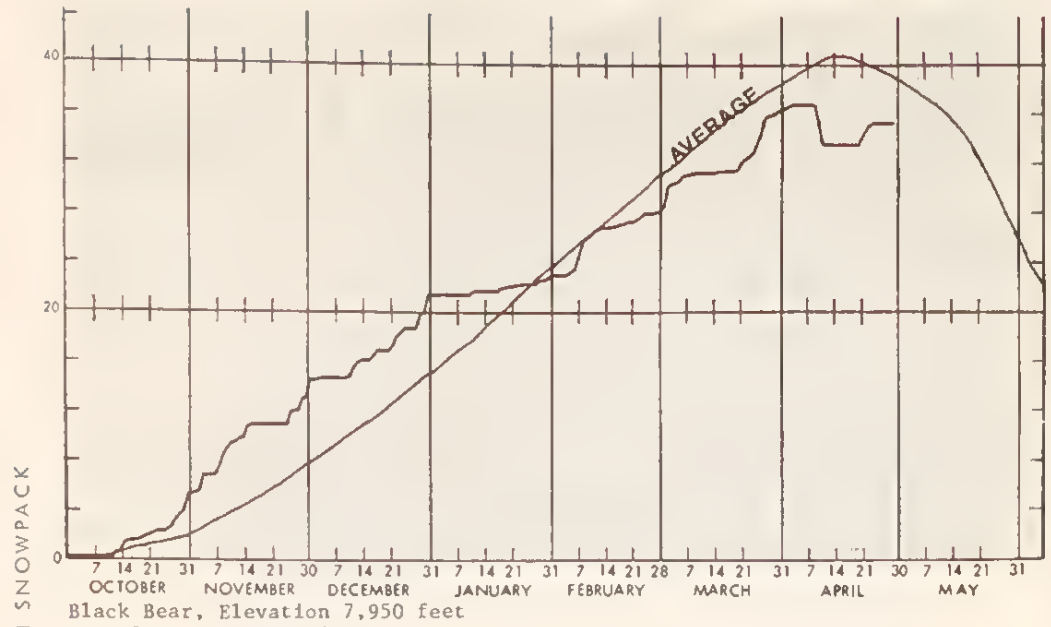
Most soils that are snowfree are drying rapidly due to lack of precipitation and warm temperatures.

With the early melt, shortages of mid- and late season water supplies can be expected on streams not having stored water.

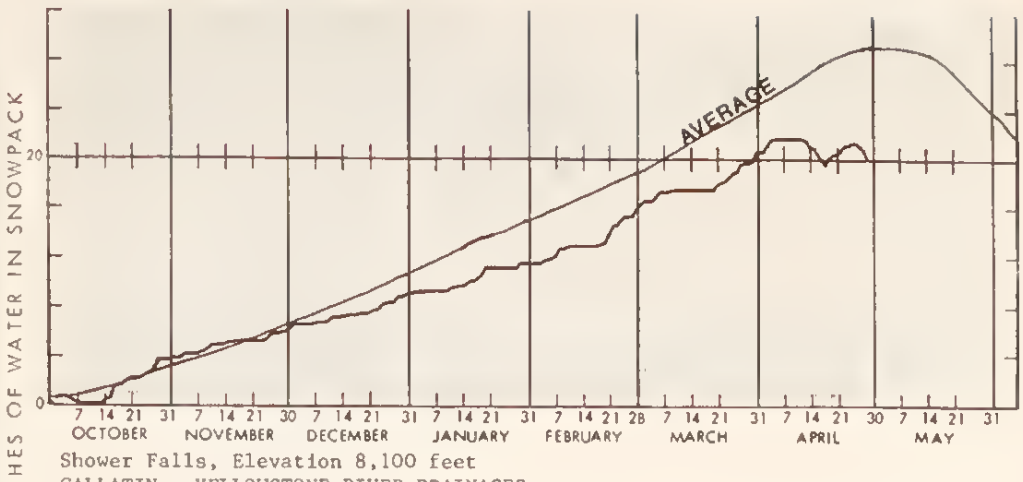


COLUMBIA RIVER DRAINAGE
MONTANA
MOUNTAIN SNOW WATER EQUIVALENT

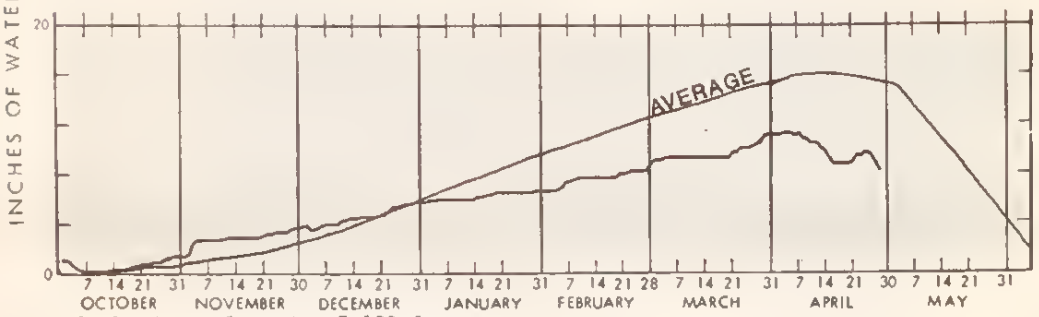
SNOW PILLOW DATA



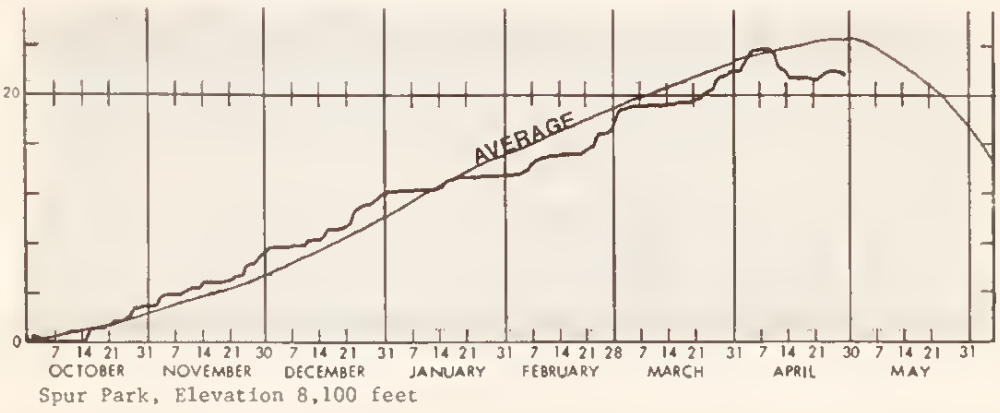
Black Bear, Elevation 7,950 feet
MADISON RIVER DRAINAGE



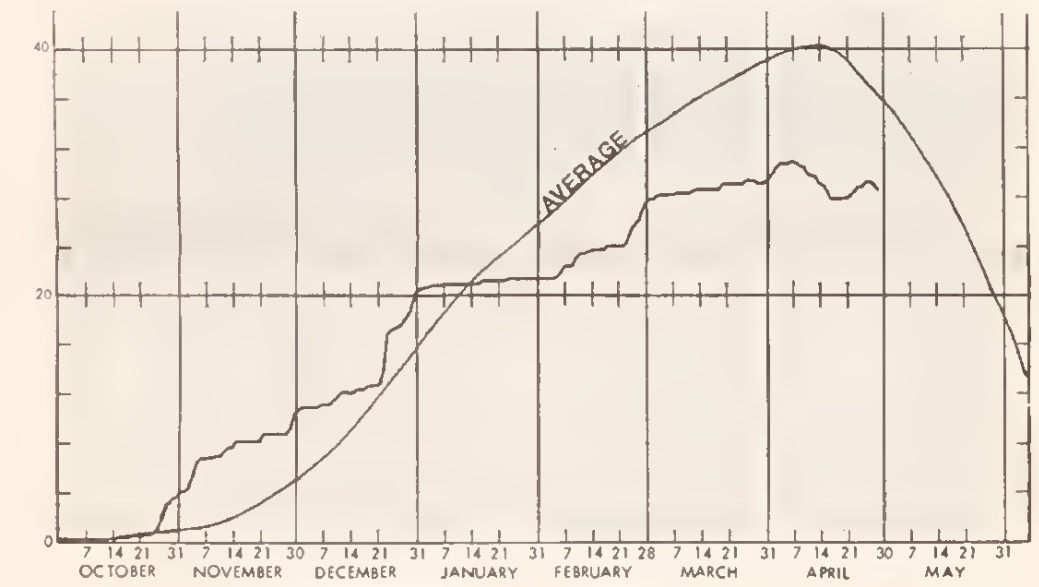
Shower Falls, Elevation 8,100 feet
GALLATIN - YELLOWSTONE RIVER DRAINAGES



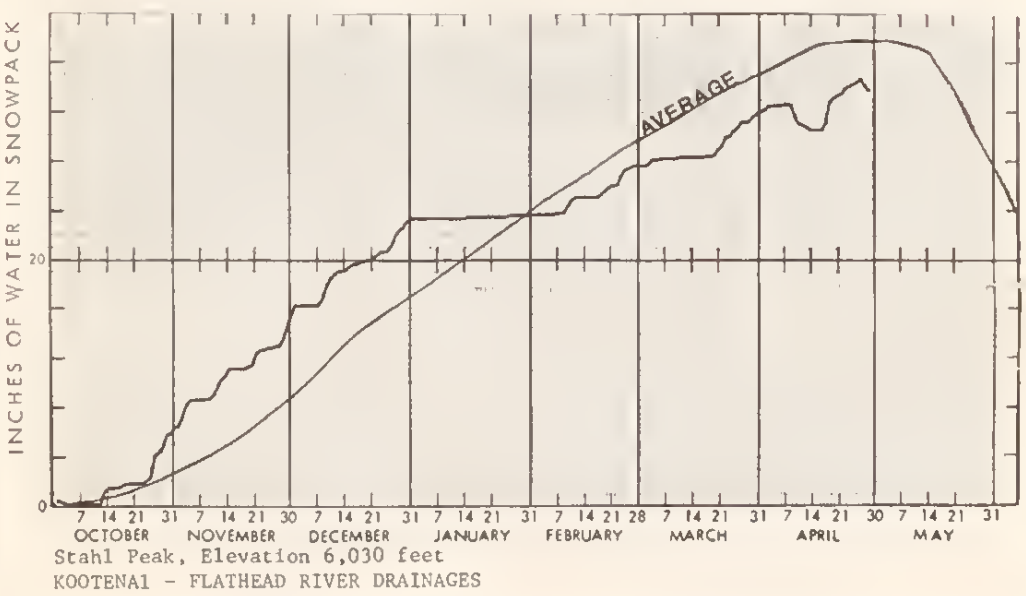
Black Pine, Elevation 7,100 feet
UPPER CLARK FORK RIVER DRAINAGE



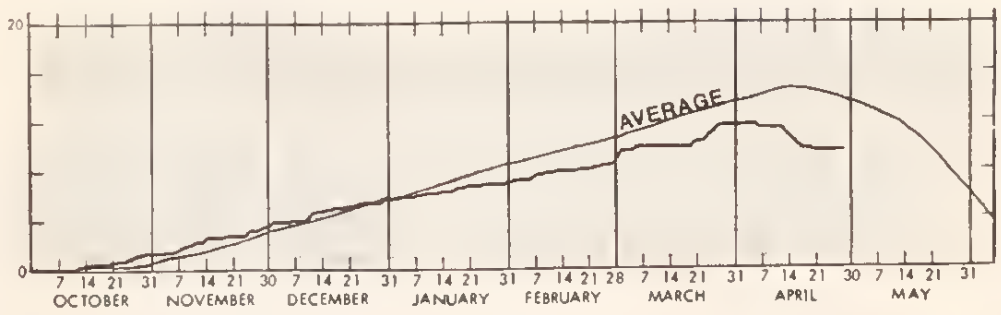
Spur Park, Elevation 8,100 feet
JUDITH RIVER DRAINAGE



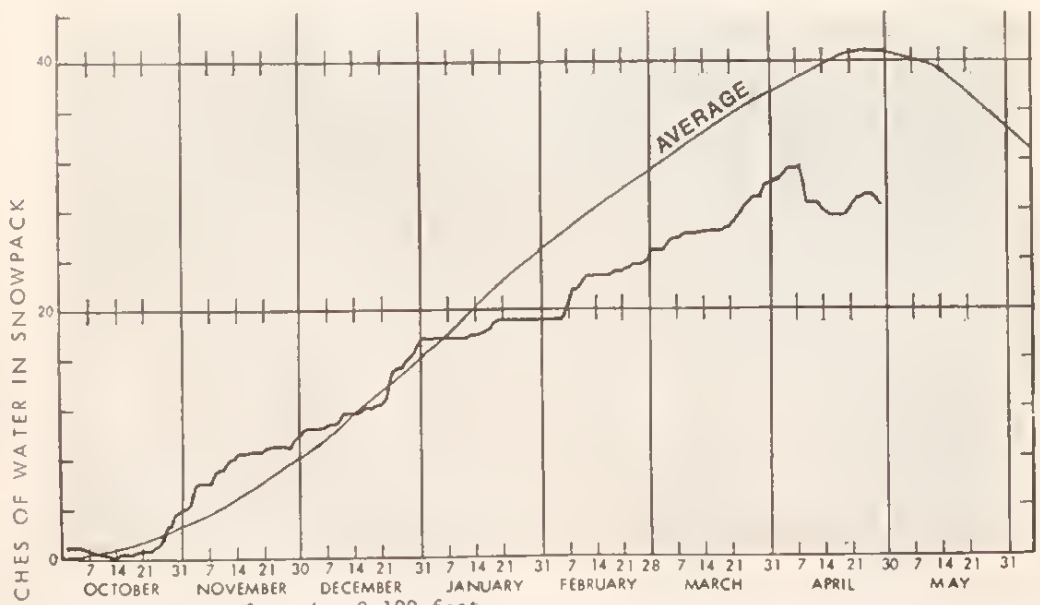
Copper Camp, Elevation 6,950 feet
BLACKFOOT RIVER DRAINAGE



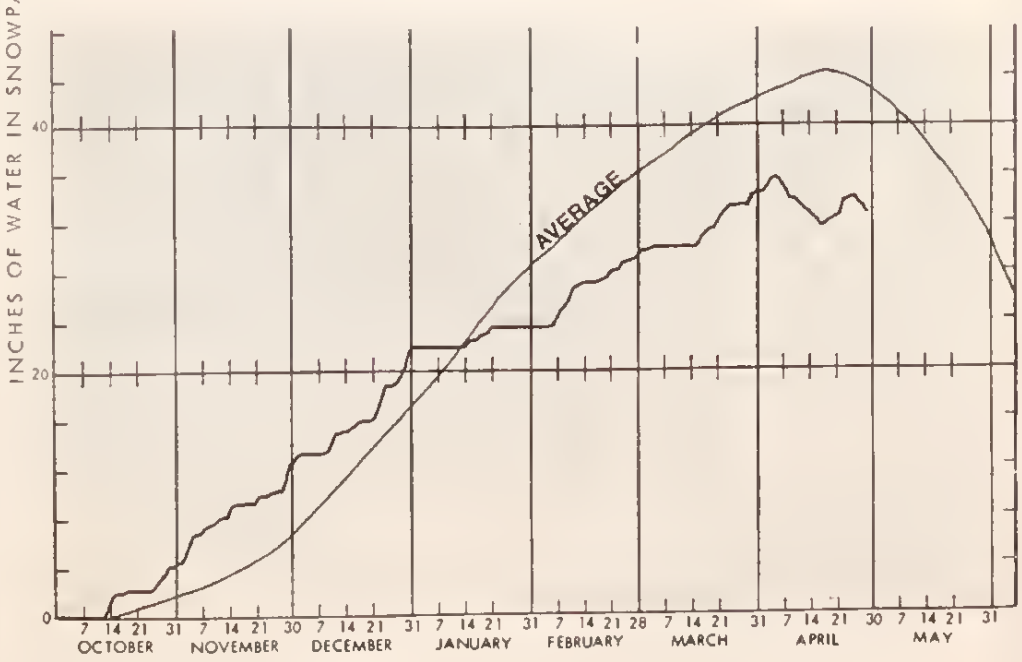
Stahl Peak, Elevation 6,030 feet
KOOTENAI - FLATHEAD RIVER DRAINAGES



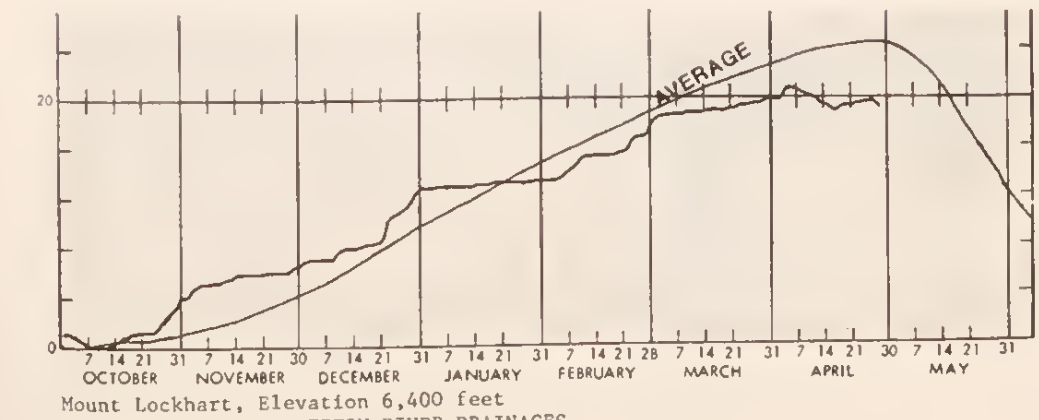
Tepee Creek, Elevation 8,000 feet
MADISON - BEAVERHEAD - RUBY RIVER DRAINAGES



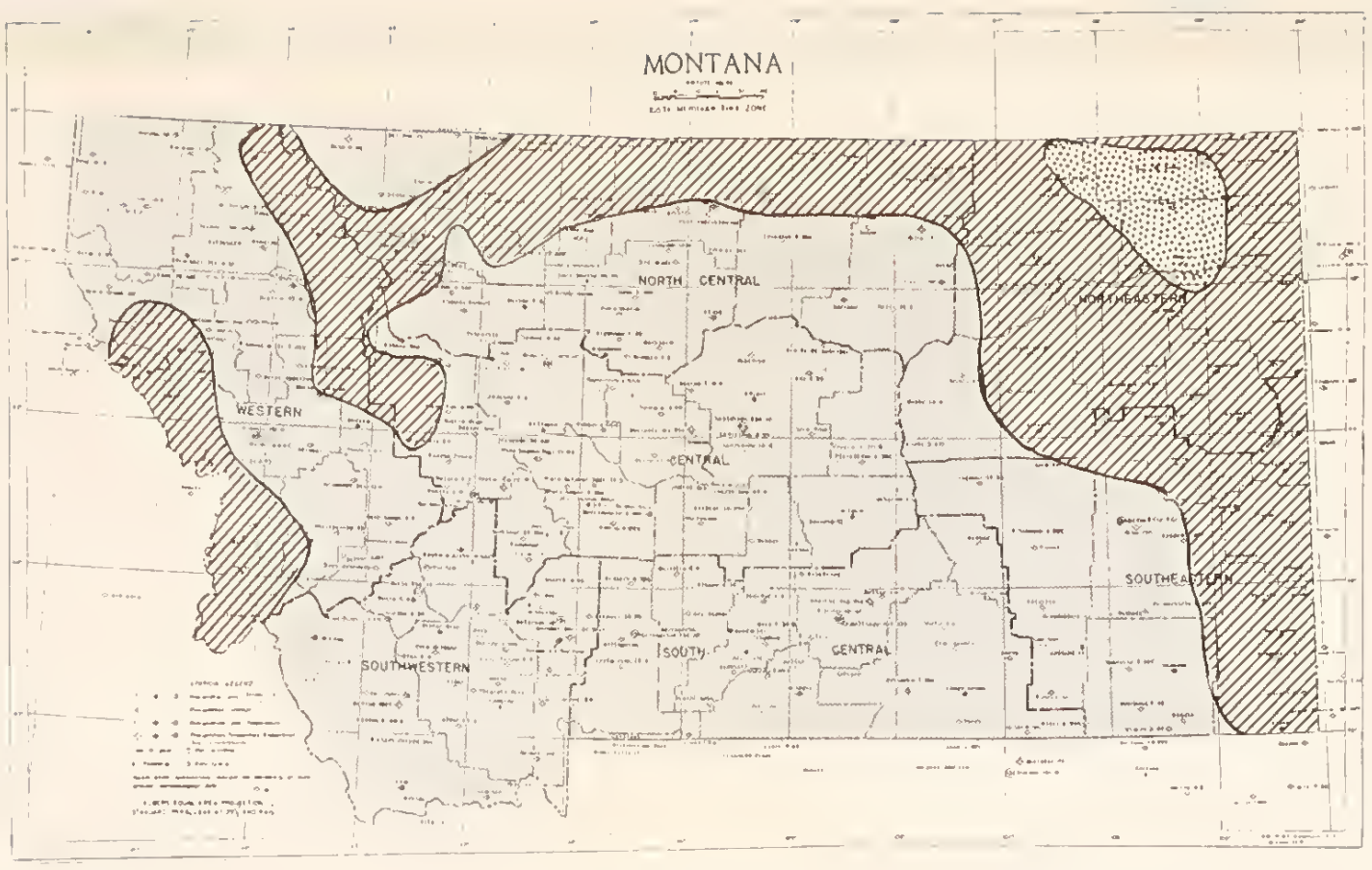
Fisher Creek, Elevation 9,100 feet
YELLOWSTONE - BOULDER - STILLWATER - CLARK'S FORK RIVER DRAINAGES



Twin Lakes, Elevation 6,510 feet
BITTERROOT RIVER DRAINAGE



Mount Lockhart, Elevation 6,400 feet
FLATHEAD - MARIAS - TETON RIVER DRAINAGES



Over 120%

80 - 120%

Under 80%

VALLEY PRECIPITATION

APRIL 1985

Source: NWS
Great Falls, MT

Alpine flowers are replacing the mountain snowpacks earlier than usual.

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH April 30, 1985

BASIN OR STREAM	RESERVOIR	USABLE CAPACITY	USABLE STORAGE THIS YEAR	USABLE STORAGE LAST YEAR	USABLE STORAGE AVERAGE
	COLUMBIA				
Kootenai	Koocanusa	5,748.2	2,167.0	2,658.0	1,864.0
Flathead	Hungry Horse	3,451.0	2,067.0	2,221.0	1,982.0
	Flathead Lake	1,791.0	845.0	798.2	932.7
	Camas (4)	45.2	26.2	32.4	27.9
	Mission Valley (8)	100.3	43.4	67.4	49.3
Clark Fork	Georgetown Lake	31.0	26.0	27.8	23.7
	Lower Willow Creek	4.9	3.1	5.1	2.7
	Nevada Creek	12.6	9.2	11.1	10.2
	Noxon Rapids	334.6	138.0	313.9	250.1
Bitterroot	Painted Rocks	31.7	---	---	22.0
	Como	34.9	20.4	24.4	18.1
	MISSOURI				
Beaverhead	Lima	84.0	67.6	71.5	54.7
	Clark Canyon	257.2	163.3	196.7	157.5
Ruby	Ruby	38.8	37.8	40.0	35.2
Madison	Hebgen Lake	377.5	289.6	266.2	229.7
	Ennis Lake	41.0	30.3	21.8	36.3
Gallatin	Middle Creek	8.0	4.7	4.2	4.4
Missouri	Canyon Ferry	2,043.0	1,536.0	1,584.0	1,499.0
	Hauser & Helena	61.9	63.0	63.0	59.3
	Helena Valley	9.2	7.7	8.3	7.6
	Lake Helena	10.4	10.9	10.9	9.8
	Holter Lake	81.9	74.9	80.5	70.8
	Fort Peck Lake	18,910.0	15,610.0	16,140.0	15,250.0
Smith	Smith River	10.6	11.5	11.6	9.1
	Newlan Creek	12.4	9.8	9.7	9.1
Musselshell	Bair	7.0	3.2	4.4	6.2
	Martinsdale	23.1	8.1	17.5	12.1
	Deadman's Basin	72.2	54.0	69.2	54.3
Sun	Gibson	99.1	73.8	60.6	50.6
	Willow Creek	32.2	14.2	27.8	23.7
	Pishkun	32.0	21.5	29.8	26.4
Marias	Lower Two Medicine	11.9	---	---	10.0
	Four Horns	19.2	---	---	12.9
	Swift	30.0	13.7	18.9	18.3
	Lake Frances	111.9	27.6	47.9	76.9
	Elwell (Tiber)	1,347.0	717.0	699.7	569.5
Milk	Beaver Creek	3.5	1.1	3.2	2.6
	Fresno	127.2	40.5	57.4	103.3
	Nelson	66.8	24.0	43.0	43.9
	HUDSON BAY				
St. Mary's	Lake Sherburne	64.3	8.8	6.9	21.6
	YELLOWSTONE				
Stillwater	Mystic Lake	21.0	0.9	0.0	2.4
Clark's Fork	Cooney	27.4	22.8	19.8	18.5
Tongue	Tongue River	68.0	36.4	24.4	40.0
Bighorn	Bighorn Lake	1,356.0	851.8	849.2	633.1

AGENCIES AND ORGANIZATIONS COOPERATING IN MONTANA SNOW SURVEYS

GOVERNMENT AGENCIES

Canada
- Department of the Environment
  - Atmospheric Environment Service
  - Water Management Service
- British Columbia Ministry of Environment
  - Inventory and Engineering Branch, Hydrology Section
- Alberta Environment
  - Technical Services Division

Federal
- Department of the Army - Corps of Engineers
- Department of Agriculture - Forest Service
- Soil Conservation Service
- Department of Commerce - National Environmental Satellite Service
- National Weather Service
- Department of Interior - Bureau of Indian Affairs
- Fish and Wildlife Service
- Geological Survey
- National Park Service
- Bureau of Reclamation
- Department of Energy - Bonneville Power Administration

STATE AGENCIES
- Montana Conservation Districts
- Montana Department of Fish, Wildlife and Parks
- Montana Department of Natural Resources and Conservation
- Montana State University - Agricultural Experiment Station
- University of Montana - School of Forestry

PRIVATE ORGANIZATIONS
- The Anaconda Company
- Big Sky of Montana
- Butte Water Company
- Flathead Valley Community College
- Montana Power Company
- Pondera County Canal & Reservoir Company

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